***STATE OF ALASKA***
***DEPARTMENT OF FISH AND GAME***
***PRIVATE NONPROFIT PROGRAM***



## I. *INDENTIFICATION OF APPLICANT*

### A. Applicant Information

| | | |
|---|---|---|
| John R. Oliva | | Kake Non Profit Fisheries Corporation (KNFC) |
| Applicant Name | | Organization |
| PO Box 523 | | 907-785-6460 |
| Address | | Phone Number |
| KAKE | ALASKA | 99830 |
| City | State | Zip |

### B. Hatchery Information

| | |
|---|---|
| Gunnuk Creek Hatchery (GCH) | 7 |
| Hatchery Name | PNP Permit Number |

## II. *STATEMENT OF APPLICANT'S GOALS AND OBJECTIVES*

A. Describe the nature of the requested alteration, why you have decided to request it, and what you generally expect to accomplish by the expansion of your program, including answers to the following questions. Will the proposed project affect wild salmon stocks or existing fisheries? How will a significant contribution to common property fisheries be made? How will potential effects and interactions between introduced or enhanced stocks and wild stocks be assessed? What marking and recovery studies are being proposed that will allow the project to be evaluated? What are the potential benefits to fisheries or wild stocks from the proposed project? Has this project been discussed with the department's area or regional management biologists? (Attach additional pages as necessary.)

This PAR is for an increase in permitted capacity of the Gunnuk Creek coho egg take from 250,000 to 500,000 eggs. The two primay reasons for this request are as follows: 1) Financial- an increase in returning coho from the additional 250,000 eggs has the potential of adding approximately $200,000 to KNFC overall cost recovery efforts, and will be a signifigant boost in our efforts to meet our debt obligations with the State of Alaska. The increase in cost to KNFC for taking and rearing the additional 250,000 coho eggs is minimal (primarily just an increase in feed costs). The return on investment should out weigh the costs. 2) To contribute more enhanced coho salmon to sport, subistence and commercial fisheries. Gunnuk Creek Hatchery has reached its current permitted capacity of 250,000 with very good success in

ocean survivals, espicially with the 2007 Brood Year.
Gunnuk Creek Hatchery started its current coho program in 2005 using indigenous Gunnuk Creek Stock with only 25,000 eggs being taken to reach its permitted capacity in 2010. Early on we had no historical data to go on except for what the natural return of coho to Gunnuk Creek was, to base our ocean survival percentages on. Now that we have return data for three years from relatively small releases with an average ocean survival of 11% we feel comfortable on basing future returns on an average 10% ocean survival. With a 10% average Ocean survival and a 9 pound average weight, the 500,000 permitted cpacity increase would be worth nearly $200,000 to KNFC at $1.00 /lb. This takes into consideration a 50% common property contribution and 250 fish needed for broodstock.

Current coded wire tag data shows a very good interception rate accross Southeast, primarily by traditional troll fisheries, but with seine and sport fisheries also affected. There has also been a very strong out-pouring of support here locally in Kake for the coho program. Sport, subsistence and comercial hand troll fishermen all fished them hard in 2010. An increase in coho production would benefit all, particulary local sport, subsistence and troll fisheries. In addition, increased production could help the overall commercial enhanced salmon allocation picture by providing more fish for seine and troll fleets.

There should be no major affect on wild stocks, unless we start to see a big problem with straying. This is usually not an issue with coho. Gunnuk Creek Hatchery will continue its practice of performing creel surveys with fishermen in nearby systems in the Kake area to check for adipose clipped coho, and will add stream surveys looking for adipose clipped coho carcasses. If any coho are found to have a clipped adipose, heads will be sent in to ADF&G Coded Wire Tag Lab by Hatchery Management for all carcasses found. All fishermen will be asked if they will turn theirs in or allow hatchery to do so. To date only clipped adipose coho that have been recovered in the Kake Area have been in Saltwater or at the Hatchery rack.
If coho are found to be straying at a rate of greater than 3% we will evaluate program to try and determine if this at a rate higher than they were straying prior to hatchery taking eggs. This will be hard to determine since there has been and still continues to be natural production in Gunnuk Creek. A better evaluation would be to determine if an increase in straying rate is corelated with an increase in release numbers.

A minimum of 15% of coho will be coded wire tagged every broodyear, to evaluate contribution, overall return survivals and straying into near by systems.

A possible benefit that was demonstrated in 2010, is subsistence and sport fishermen fishing Gunnuk Creek returning coho, instead of wild returns to other systems. This lightened pressure on wild coho salmon returns to Hamilton River and Irish Creek, which are normally heavily fished by local Kake residents.

Area mamagement biologist have been contacted regarding this PAR. ALL their questions have ben addressed within this PAR document.

## III. *IMPACTS ON EXISTING HATCHERY PROGRAM*

### A. Present Permitted Capacity
(numbers of green eggs by species)

| | | | |
|---|---|---|---|
| Pink | up to 20,000,000 | Coho | 250,000 |
| Chum | up 65,000,000 | Chinook | |
| Sockeye | | Other | |

### B. Capacity After Request
(numbers of green eggs by species)

| | | | |
|---|---|---|---|
| Pink | up to 20,000,000 | Coho | 500,000 |
| Chum | up 65,000,000 | Chinook | |
| Sockeye | | Other | |

### C. Water Use

1. **List the total amount of water available and the source.**

5.0 CFS of water is available and permitted. Scource is a 10 inch HDPE pipe line Suppying water from the Kake Dam and water diverted from hatchery diversion dam at hatchery.

2. **List the amount of water presently being used.**

Currently up to 2 CFS of water is being used

3. **List the additional amount of water needed for this alteration.**

Approximately an additional 1 CFS of water part of the year (prior to ponding pinks and chums) after ponding back to current 2 CFS.

## IV. *HATCHERY DESIGN*

A. Please provide a detailed description of new facilities needed with this alteration (e.g., buildings, incubators, rearing space, piping, etc.). This description should represent a solid concept of the proposed hatchery changes/expansion. Drawings showing the layout of new structures should be attached when appropriate.

No new incubation facilities or equipment are needed for this alteration. Four new linear raceways (prefabed) will be needed for this alteration they will be going on top of and next to an existing sump structure which is currently being used for storage of surplus incubators. Power and water supply from both main pipelne and diversion dam, are already present only discharge plumbing into current discharge line would have to be completed.

## V. *DECLARATION AND SIGNATURE*

I declare that the information given in this application is, to my knowledge, true, correct, and complete.

John R Oliva — Name of Applicant

4 Feb 2011 — Date Signed

Signature of Applicant